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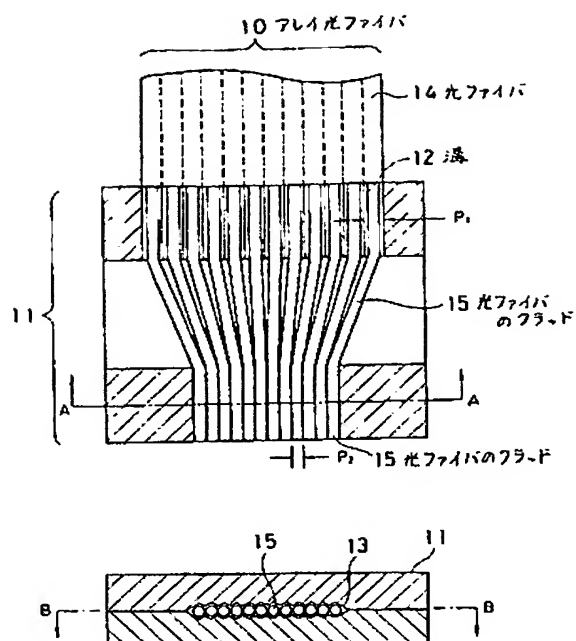
APPLICATION DATE : 29-09-88  
APPLICATION NUMBER : 63245252

APPLICANT : NEC CORP;

INVENTOR : UJI TOSHIO;

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TITLE : TERMINAL OF ARRAYED OPTICAL FIBER



ABSTRACT : PURPOSE: To obtain a small-sized and inexpensive optical module by providing a means of holding the terminals of plural optical fibers arrayed at specified intervals in parallel with each other to a flat plate shape by narrowing the spacings therebetween to the specified spacings smaller than the inter-fiber spacings.

CONSTITUTION: The arrayed optical fibers 10 consist of 10 optical fibers 14. First grooves 12 of a pitch  $P_1$  and second grooves 13 of a pitch  $P_2$  are formed by, for example, etching, to a silicon block 11. The pitch  $P_1$  is set at  $250\mu\text{m}$  equal to the pitch of the arrayed optical fibers 10 and the pitch  $P_2$  is set at, for example,  $150\mu\text{m}$ . The pitch of the optical fibers 10 is determined by the diameter of the clads and the thickness of the coatings. The coating layers of  $125\mu\text{m}$  exist between the cores of the respective optical fibers 14 of the arrayed optical fibers 10 if the diameter of the clads is  $125\mu\text{m}$ . The spacings between the optical fibers can, therefore, be reduced down to  $125\mu\text{m}$  by removing the coatings. The respective optical fibers 14 which constitute the arrayed optical fibers 10 are fixed into the first grooves 12 and the 2nd grooves 13 and the end faces of the 2nd grooves 13 of the silicon block 11 are polished to work the front ends of the optical fibers 14 to specular surfaces.

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